

REMARKS

By this amendment, Applicants have amended claim 5 to recite that the wall consists of a single layer of the controlled hydrocarbon permeability composition. Claim 5 has also been amended to recite that the fillers are present in the amount to reduce permeability of the structure calculated from the permeability of the polymer material alone and from the amount of hydrocarbons released through the polymer material for the duration of life of the structure. See, e.g., page 3, lines 12-15 of Applicants' specification. Applicants have also added new claims 24-26 to define further aspects of the invention. See, e.g., page 5, line 20 et seq. of Applicants' specification.

Applicants thank the Examiner for the telephone interview conducted between the between Examiner and the undersigned on November 17, 2008. During the interview, the undersigned proposed amending claim 5 to recite the amount of the fillers and the manner in which the amount is calculated. The undersigned also proposed amending claim 5 to recite that the wall consist of the single layer. The Examiner indicated she was of the opinion such amendments raised new issues requiring further search and, therefore, indicated that the amendment would not be entered in view of the finality of the Office Action.

Claims 3-8 and 12 stand rejected under 35 U.S.C. 102(b) as being anticipated by European patent application publication number 1108598 A2 to Ellis (Ellis '593) with evidence provided by U.S. Patent Application Publication No. 2003/0049398 A1 to Ellis. Claims 5, 9, 10 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis '598. Applicants traverse these rejections and request reconsideration thereof.

The present invention relates to a structure for containing hydrocarbons comprising a wall consisting of a single layer of a controlled hydrocarbon

permeability composition, and to a tank for a motor vehicle and a fuel line for a motor vehicle comprising such a structure. The controlled hydrocarbon permeability composition comprises a mixture of polymer material and fillers. The fillers are mineral fillers and are selected to adsorb and to trap an amount of hydrocarbons discharged through the polymer so as to reduce the permeability of the composition to prevent hydrocarbons from passing completely through the wall.

EP '598 to Ellis discloses a permeation barrier fuel tank for a vehicle that includes a shell 12 having a wall formed from a plurality of layers. The layers include at least an inner layer 30, an outer layer 34 and a fuel permeation barrier layer 32 disposed between the inner layer 30 and the outer layer 34 and being made of a nanocomposite polymer. The nanocomposite polymer is a polymer material in which a small quantity of a "platy filler material" has been uniformly dispersed. See, paragraph 0014 of EP '598. As disclosed in paragraph 0016 of EP '598, the "platy filler material" presents an efficient obstacle to the transport, i.e., diffusion, of penetrant molecules, such as those normally found in fuels.

Contrary to Ellis '598, the structure of the present invention comprising a wall consisting of a single layer of a controlled hydrocarbon permeability composition. On the other hand, in Ellis '598, the fuel tank includes a shell having a wall formed from a plurality of layers. The presently claimed invention is patentable over Ellis '598 for this reason alone.

Moreover, according to the present invention, the fillers are mineral fillers and are selected to adsorb and to trap an amount of hydrocarbons discharged through the polymer so as to reduce the permeability of the composition to prevent hydrocarbons from passing completely through the wall. The fillers are present in an amount to reduce permeability of the structure calculated from the permeability of the

polymer material alone and from the amount of hydrocarbons released through the polymer material for the duration of the life of the structure.

On the other hand, the mineral filler in the structure of the present invention is selected to adsorb and to trap an amount of hydrocarbons discharged through the inner layer. EP '598 does not disclose that the platy filler material is selected to adsorb and to trap an amount of hydrocarbons. Rather than disclosing that the platy filler material adsorbs and traps hydrocarbons, EP '598 discloses that the platy filler material presents an efficient obstacle to the transport of molecules found in fuel.

While 0014 of Ellis '598 discloses that a small quantity from about 0 to 15 wt. % of platy filler material can be uniformly dispersed, there is no disclosure that the amount is calculated from the permeability of the polymer material alone and from the amount of hydrocarbons released through the polymer material for the duration of life of the structure. Certainly there is no disclosure in Ellis '598 that the amount of fillers are present in the minimum amount to adsorb and trap all of the hydrocarbons calculated to be released through the polymer material alone for the duration of life of the structure.

Accordingly, Ellis '598 does not disclose and would not have rendered obvious the presently claimed invention.

Claim 22 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis '598 in view of U.S. Patent No. 6,538,069 to Faulkner. Applicants traverse this rejection and request reconsideration thereof.

The Examiner cites the Faulkner patent as teaching the term "platy filler" is recognized to mean mineral material such as mica, talc or clay. However, clearly nothing in Faulkner clearly remedies the basic deficiencies noted above with respect to Ellis '598. Accordingly, claim 22 is patentable at least for the reasons noted above.

Claims 2, 10 and 11 stands rejected under 35 U.S.C. 103(a) as being unpatentable over EP '598 and Sikdar et al. Applicants traverse this rejection and request reconsideration thereof.

Since the object of EP '598 is to provide a permeation barrier layer, while the object of pervaporation in Sikdar et al. is to diffuse a component or components to the other side of the membrane, there would have been absolutely no reason to modify the teachings of EP '598 with those of Sikdar et al. Thus, there would of have been no reason to use activated carbon or zeolite, the absorbing component in Sikdar et al., in the permeation barrier fuel tank of EP '598.

Accordingly, claims 2, 10 and 11 are patentable over the proposed combination of references.

Claim 23 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis '598 and U.S. Patent No. 5,508,330 to Coughlin et al. Applicants traverse this rejection and request reconsideration thereof.

The Examiner has cited the Coughlin et al. patent as teaching that it is well known in the barrier material art to perform fluorination on the inside of containers for holding gasoline. Clearly nothing in Coughlin et al. would have remedied any of the basic deficiencies noted above with respect to Ellis '598. Accordingly, claim 23 is patentable over the proposed combination of references, at least for the reasons noted above.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli,

Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 612.44505X00),
and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP
/Alan E. Schiavelli/
Alan E. Schiavelli
Registration No. 32,087

AES/at
(703) 312-6600